

Claims

- [c1] 1. A back light module, comprising:
- a frame;
 - a reflecting plate set on the bottom interior section of the frame;
 - at least a lamp set within the frame above the reflecting plate;
 - a diffusion plate set over the frame and above the lamp;
 - a plurality of optical films set over the diffusion plate;
 - and
 - at least a supporting element set between the reflecting plate and the diffusion plate wherein each supporting element has a first supporting section and a second supporting section.
- [c2] 2. The back light module of claim 1, wherein material constituting the supporting element comprises a transparent material.
- [c3] 3. The back light module of claim 1, wherein the first supporting section separates from the diffusion plate by a first distance and the second supporting section separates from the lamp by a second distance.

- [c4] 4. The back light module of claim 1, wherein the supporting element is a conical body having a tip section and a through hole, wherein the tip section of the conical body supports the diffusion plate and the through hole supports the lamp, and wherein a part of the lamp is positioned within the through hole.
- [c5] 5. The back light module of claim 1, wherein the supporting element is a thin triangular body having a tip section and a through hole, wherein the tip section of the thin triangular body supports the diffusion plate and the through hole supports the lamp, and wherein a part of the lamp is positioned within the through hole.
- [c6] 6. The back light module of claim 1, wherein the supporting element is a U-shaped body with two conical branches, wherein the tip section of the conical branches supports the diffusion plate and the interior bottom surface of the U-shaped body supports the lamp.
- [c7] 7. The back light module of claim 1, wherein one end of the supporting element is attached to the reflecting plate through a thermal glue layer.
- [c8] 8. The back light module of claim 1, wherein one end of the supporting element is latched onto a corresponding groove on the reflecting plate.

- [c9] 9. The back light module of claim 1, wherein the supporting element and the reflecting plate are locked together using a screw that passes through the frame and the reflecting plate.
- [c10] 10. A liquid crystal display, comprising:
a back light module, having:
a first frame;
a reflecting plate set up on the bottom interior section of the first frame;
at least a lamp set within the first frame above the reflecting plate;
a diffusion plate set over the first frame above the lamp;
a plurality of optical films set over the diffusion plate;
and
at least a supporting element set between the reflecting plate and the diffusion plate, wherein each supporting element has a first supporting section and a second supporting section;
a liquid crystal panel above the optical films; and
a second frame positioned over the first frame and covering the edges of the liquid crystal panel.
- [c11] 11. The liquid crystal display of claim 10, wherein material constituting the supporting element comprises a transparent material.

- [c12] 12. The liquid crystal display of claim 10, wherein the first supporting section separates from the diffusion plate by a first distance and the second supporting section separates from the lamp by a second distance.
- [c13] 13. The liquid crystal display of claim 10, wherein the supporting body is a conical body having a tip section and a through hole, wherein the tip section of the conical body supports the diffusion plate and the through hole supports the lamp, and wherein a part of the lamp is positioned within the through hole.
- [c14] 14. The liquid crystal display of claim 10, wherein the supporting element is a thin triangular body having a tip section and a through hole, wherein the tip section of the thin triangular body supports the diffusion plate and the through hole supports the lamp, and wherein a part of the lamp is positioned within the through hole.
- [c15] 15. The liquid crystal display of claim 10, wherein the supporting element is a U-shaped body with two conical branches, wherein the tip section of the conical branches supports the diffusion plate and the interior bottom surface of the U-shaped body supports the lamp.
- [c16] 16. The liquid crystal display of claim 10, wherein one end of the supporting element is attached to the reflect-

ing plate through a thermal glue layer.

- [c17] 17. The liquid crystal display of claim 10, wherein one end of the supporting element is latched onto a corresponding groove on the reflecting plate.
- [c18] 18. The liquid crystal display of claim 10, wherein the supporting element and the reflecting plate are locked together using a screw that passes through the frame and the reflecting plate.